

Basic Questions Regarding Acute Exposure Guideline Levels (AEGLs) in Emergency Planning and Response

What are AEGLS?

Acute Exposure Guidelines Levels (AEGLs) indicate the concentrations of a chemical in air above which different types of health effects could begin to occur in an unprotected civilian population. A National Advisory Committee, managed by the U.S. EPA, is currently developing AEGLs for hundreds of toxic industrial chemicals (e.g., chlorine and ammonia) as well as for chemical warfare agents. A separate committee (the National Research Council) provides a final review and then publishes the AEGLs. AEGLs include three concentration levels for specified time durations; these show the range of toxic effects caused by each chemical. Generic descriptions of the different levels are shown in Figure 1.

Who uses AEGLs, and how?

AEGLs are to be used by federal and state agencies to aid in the development of emergency preparedness plans and to prioritize emergency response actions in the event of a chemical release from an accident or intentional terrorist attack. Used together with computerized air modeling, the different AEGL levels allow emergency personnel to determine areas of highest risk. This will assist in making the most appropriate actions to minimize the overall impacts to the public. Such actions may include public notification and instruction, sheltering-in-place, evacuation, medical response and treatment, or some combination of these approaches (See Figure 2 for an example of possible decision and actions based on AEGLs; these represent the most common application scenario, though decisions are to be tailored to site-specific conditions).

How can I get more information?

Depending on your question, there are many additional sources of information, some more technical than others. Examples include:

1. USACHPPM Fact Sheets
 - ⇒ Chemical Exposure Standards, Jan 2003
 - ⇒ Detailed Facts Regarding Health Effects Associated with AEGLs for.... nerve agents, sulfur mustard, Jan 03
2. Ready-Set-Act Fact Sheet: AEGLs and CSEPP, Jan 03
3. Frequently Asked Questions (FAQs) Regarding AEGLs, Ready-Set-Act Fact Sheet, Jan 03
4. National Research Council (2001). *Standing Operating Procedures for Developing Acute Exposure Guideline Levels for Hazardous Chemicals*. National Academy Press, Wash, D.C. <http://www.nap.edu/index.html>

Figure 1. Generic Description of AEGL Levels*

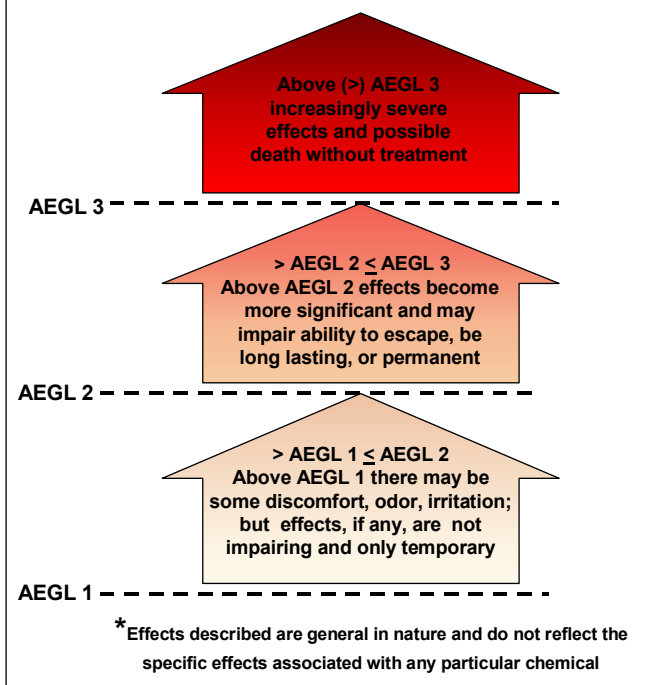
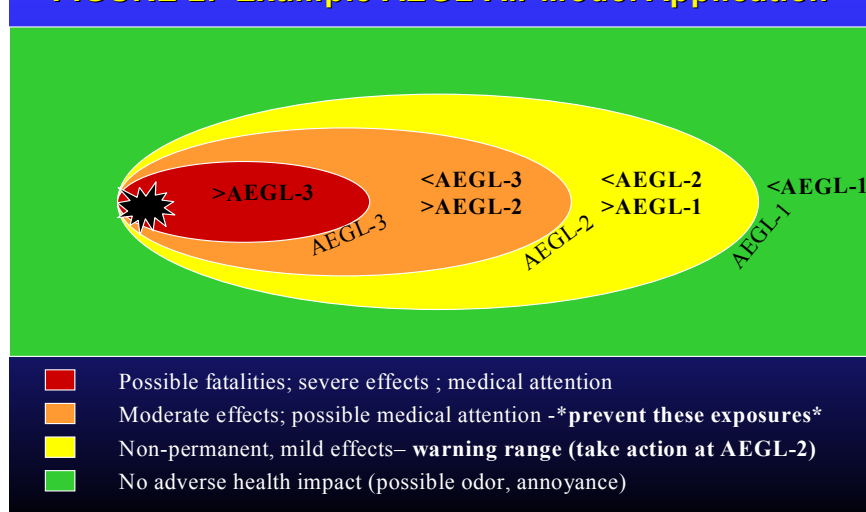


FIGURE 2. Example AEGL Air Model Application



For additional information contact USACHPPM at 410-410-5213/6096

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